



FSA Update

FSA Consulting
FSA Environmental
FSA Irrigation
Feedlot Services Australia

FSA Update

July to September 2003

Welcome to our New Staff!

It's been a while since the last instalment of our newsletter, but as they say better later than never! We've simply been too busy!

FSA Consulting is pleased to welcome several new staff members to our Toowoomba office:

Alison Weiss: Canadian Engineering Student

Charlie MacFarlane: Agricultural Engineer

David Smith: GIS Analyst

Dr. Ian Craig: Air Quality Specialist.



FSA Staff doing a Water Bug count
Part of NRM training—see page 3

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New Service

How efficient is your surface irrigation?

Changing field layouts, irrigation management or irrigation systems can all improve irrigation efficiency. The questions are which change will give you the **best water saving** and is the change cost effective?

Many irrigators measure the amount of water they pump onto their farms, but very few measure how much they apply to each field.

Moisture probes are available to help measure the soil moisture extraction rate and the approximate amount applied.

Soil moisture probes are very useful for scheduling however, they don't accurately identify which fields take the most water to irrigate or if changes in irrigation practices will produce significant water savings.



There is now a commercially viable method to reliably measure irrigation

application rates to individual fields. The system uses the **IRRIMATE** equipment developed by the National Centre for Engineering in Agriculture.

IRRIMATE comprises flow meters and advance meters used in conjunction with the surface irrigation model **SIRMOD**.



Both of these packages are proven research tools and have been evaluated over a number of years. They have been used on a commercial basis for over three years

FSA Consulting can use **IRRIMATE** and **SIRMOD** to model water use for your farm to help you to improve water use efficiency.

For further information contact:

Ainsley Smith or David Smith

Email: Ainsley.Smith@fsaconsulting.net

Phone: (07) 4632 8230

Fax: (07) 4632 8057

Visit us @ www.fsaconsulting.net



Development of Intensive Livestock Environmental Guidelines

FSA Consulting has always been at the leading edge of the environmental management of intensive livestock systems. Because of this background, FSA Consulting has been selected to develop various environmental guidelines for intensive stock. Three current examples are listed below.

Model National Environmental Guidelines for Piggeries

Maximising opportunities for industry growth is a strategic objective of **Australian Pork Limited (APL)**. A consistent regulatory approach throughout Australia based on the latest technical information will facilitate new development proposals, facility upgrades and compliance with licence and approval conditions and current regulatory standards. To facilitate this, APL contracted *FSA Consulting* to develop **Model National Environmental Guidelines for Piggeries**.



The Guidelines will provide an over-arching, up-to-date benchmark for the pig industry and for regulatory authorities to use in assessing the environmental sustainability of piggeries. They will include design and operation benchmarks for piggeries.

Development of indicators of sustainability for effluent reuse in the intensive livestock industries: piggeries and cattle feedlots

FSA Consulting has recently completed a project to develop indicators of sustainability for effluent reuse in the intensive livestock industries piggeries and cattle feedlots. **Australian Pork Limited, Meat and Livestock Australia and NSW EPA** jointly funded the project.

The project identified sustainability indicators for nitrogen, phosphorus, salinity and sodicity. Trigger values were identified to assist industry in reviewing their effluent and manure reuse forward plans. The monitoring and review of these sustainability indicators will assist industry with operating environmentally sustainable operations.



A risk assessment process was also developed. It considers the properties of the site, the whole farm nutrient mass balance, the design and management of the reuse area and the sustainability indicators to decide if adverse environmental impacts are likely. The outcome of the risk assessment process is a risk appraisal for each resource and targeted environmental monitoring to measure sustainability.

Victorian Code of Practice - Piggeries



FSA Consulting has recently been engaged to review the Victorian Code of Practice – Piggeries. The objective of the project is to finalise the current draft, ready for inclusion in the Victoria Planning Provisions as an incorporated document.

For further information, contact:

Robyn Tucker

Email: Robyn.Tucker@fsaconsulting.net

Phone: 03 5381 0709

Fax: 03 5381 0719

Eugene McGahan.

Email: Eugene.McGahan@fsaconsulting.net

Phone: 07 4632 8230

Fax: 07 4632 8057



New Service

Automatic Weather Station Service

Automatic weather stations can provide accurate, continuous measurement of climatic conditions. This information can help in daily decision making and improve management practices saving you time and money!

Following requests from our clients, FSA Consulting now provides an automatic weather station service. The service includes the design of an appropriate system and equipment selection, equipment installation, staff training and support, annual maintenance visits, emergency response, data analysis and interpretation and data file backup.



For further information contact :

Charlie MacFarlane

Email: Charlie.MacFarlane@fsaconsulting.net

Phone: (07) 4632 8230

Fax: (07) 4632 8057

Natural Resource Management Training

Soil Erosion ?
Vegetation Management ?
Water Policies ?
Water Quality ?
Biodiversity ?
Salinity ?
Weeds ?
Climate Change ?

Are you perplexed by the range of natural resource management issues facing your farming enterprise?

To assist you through the issues and the growing mass of legislation, FSA Consulting has recently developed a training course in Natural Resource Management. The course is tailored to your property and covers the following areas:

Land Title and Ownership
 Shire Zoning and Controls
 Local Climate
 Hydrology, Drainage and Flooding
 Riparian Zone Management
 Groundwater—Quality, Quantity and Depth
 Soil Resources, Soil Management
 Nutrient Management
 Water Quality and Catchments
 Biodiversity
 Pests / Weeds
 Chemicals
 Whole Farm Water Resources
 Water Use Efficiency

Outcomes of the course include:

- NRM catalogue for your property.
- Collation of all licences and permits issued for your property.
- Risk assessment of NRM issues on your property.

The course will also allow you to prepare your own Vegetation Management Plan, Land and Water Management Plan and FarmCare Code of Practice Manual.

The Farm Business Improvement Program, **FarmBis**, will **subsidise 85% of the cost** of the course up to \$10,000. This means that the total course cost can be \$11,765 but the net farm contribution is only \$1,765. The cost of the course depends on farm size, and distance from our offices.

For further information contact:

Ainsley Smith or Justin Galloway

Email: Ainsley.Smith@fsaconsulting.net

Phone: (07) 4632 8230

Fax: (07) 4632 8057





Staff Profile—Charlie MacFarlane

Originally from the Northern Territory, near Mataranka, Charlie grew up on large cattle stations on the Barkly Tablelands and then in the Channel Country of far Western Queensland.

After two years of uni, Charlie needed a break from study and accepted a job working for the DNR on the bore drain replacement project for 6 months. Then it was off to California for two months, where he taught horse riding at a summer camp, before studying on exchange at the University of Nebraska for one year. Whilst in Nebraska, Charlie gained a strong insight into the US feedlot industry by working at a 2500-head feedlot and touring many others.

After returning to Australia, Charlie finished off the last two years of his university course. During this time, he spent two months working for FSA Consulting and the bore drain replacement project in late 2002.

On 13th September, Charlie graduated from USQ, Toowoomba, with a double degree – B Engineering (Agricultural) B Business (Logistics and Operations Management).

Since starting work for FSA Consulting in July, Charlie has been involved in pipeline design, weather station installation and maintenance, and some feedlot design.

Position: Agricultural Engineer

Special Work Interests: Feedlot design and construction, pipe network design.

Leisure Time Interests: Heading bush, water skiing and wakeboarding, golf, pulling the tops off a few cold ones around the bbq.

Charlie MacFarlane

07-4632 8230

0427 328 010

Charlie.MacFarlane@fsaconsulting.net



Staff News

David and Robyn

welcomed the arrival of baby Lachlan Hamish on 17 June 2003. Weighing in at a healthy 3140g, Lachlan is a brother for Gaby. Congratulations to Robyn, David and Gaby!



Eugene McGahan represented FSA Consulting by presenting a paper at the recent BEEFEX conference.

Congratulations to **David Watts** for representing Queensland at the National H o c k e y Championship.



Simon Barker recently celebrated his 5 year anniversary of employment at FSA Consulting. Only 30 more to go and you'll get a gold watch Simo!

FSA Consulting

Toowoomba Office

PO Box 2175
(11 Clifford St)
Toowoomba Qld 4350

Ph: 07-4632 8230
FAX: 07-4632 8057
Email: fsa@fsaconsulting.net

Horsham Office

2 Lewis St
Horsham Vic 3400

Ph: 03-5381 0709
FAX: 03-5381 0719
Email: Robyn.Tucker@fsaconsulting.net